

Claims

What is claimed is:

1. A method for providing autonomic, event-driven upgrade maintenance of one or more software modules residing on a computer system, the method comprising:
 - detecting a predefined triggering event on the computer system indicative of a potential maintenance issue;
 - connecting to an upgrade management server;
 - creating on the upgrade management server a list of recommended upgrade modules to download to the computer system, the list based upon a set of selection policies;
 - downloading the list of recommended upgrade modules from the upgrade management server to the computer system; and
 - selectively installing upgrade modules chosen from the list of recommended upgrade modules on the computer system.
2. The method of claim 1, wherein the method further comprises the step of:
 - notifying a user of the status of the upgrade maintenance operation.
3. The method of claim 1, wherein the predefined triggering event comprises a change to the hardware configuration of the computer system.
4. The method of claim 1, wherein the predefined triggering event comprises a change to the software configuration of the computer system.

5. The method of claim 1, wherein the predefined triggering event comprises exceeding a predefined error threshold on the computer system.
6. The method of claim 1, wherein the predefined triggering event comprises exceeding a predefined performance threshold on the computer system.
7. The method of claim 1, wherein the predefined triggering event comprises exceeding a predefined elapsed time since the last connection to the upgrade management server.
8. The method of claim 1, wherein the steps of connecting to a upgrade management server and selectively installing the list of recommended upgrade modules are controlled by a set of user defined policies.
9. The method of claim 8, wherein the set of user defined policies includes a preferred connection time.
10. The method of claim 8, wherein the set of user defined policies includes the connection resource to be used.
11. The method of claim 8, wherein the set of user defined policies includes the specification of computer system areas/software products to enable automatic application of upgrades.
12. The method of claim 8, wherein the set of user defined policies includes a defined time to connect to the upgrade management server to check for upgrades.
13. The method of claim 8, wherein the set of user defined policies includes a defined elapsed time interval for connecting to the upgrade management server to check for upgrades.
14. The method of claim 8, wherein the set of user defined policies includes a notification list for e-mailing user of information and actions relative to the upgrade management process.

15. The method of claim 8, wherein the set of user defined policies include a list of one or more upgrade management servers to be used for the upgrade management process.
16. The method of claim 1, wherein the computer software comprises software applications.
17. The method of claim 1, wherein, the computer software comprises operating systems.
18. The method of claim 1, wherein the computer software comprises device drivers for installed hardware components.
19. The method of claim 1, wherein the set of selection policies is sent from the computer system to the upgrade management server.
20. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules based upon a specific set of upgrades requested by the computer system.
21. The method of claim 19, wherein the set of selection policies includes comparing the revision levels of the one or more software modules residing on the computer system against the revision levels one or more software modules residing on the upgrade management server.
22. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying modules associated with a hardware change on the computer system.
23. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying software modules associated with a software change on the computer system.

24. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying upgrades specifically associated with an error triggering event on the computer system.
25. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying upgrades specifically associated with a performance triggering event on the computer system.
26. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by analyzing a problem history provided by the computer system.
27. The method of claim 19, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying compatible revision levels between two or more software modules included within the list of modules.
28. The method of claim 1, wherein the step of downloading the list of recommended upgrade modules from the upgrade management server to the computer system further comprises the step of downloading the upgrade modules themselves from the upgrade management server to the computer system.
29. The method of claim 1, wherein the step of selectively installing upgrade modules chosen from the list of recommended upgrade modules on the computer system further comprises the step of downloading any upgrade modules chosen from the list of recommended upgrade modules from the upgrade management server to the computer system prior to the install.

30. A computer-readable program stored on a computer-readable medium, said computer readable program being configured to perform the steps of:
- detecting a predefined triggering event on a computer system indicative of a potential maintenance issue;
- connecting to an upgrade management server;
- creating on the upgrade management server a list of recommended upgrade modules to download to the computer system, the list based upon a set of selection policies;
- downloading the list of recommended upgrade modules from the upgrade management server to the computer system; and
- selectively installing upgrade modules chosen from the list of recommended upgrade modules on the computer system.
31. The computer-readable program of claim 30, wherein the computer-readable program further includes the step of:
- notifying a user of the status of the upgrade maintenance operation.
32. The computer-readable program of claim 30, wherein the predefined triggering event comprises a change to the hardware configuration of the computer system.
33. The computer-readable program of claim 30, wherein the predefined triggering event comprises a change to the hardware configuration of the computer system.
34. The computer-readable program of claim 30, wherein the predefined triggering event comprises exceeding a predefined error threshold on the computer system.

35. The computer-readable program of claim 30, wherein the predefined triggering even comprises exceeding a predefined error threshold on the computer system.
36. The computer-readable program of claim 30, wherein the predefined triggering event comprises exceeding a predefined elapsed time since the last connection to the upgrade management server.
37. The computer-readable program of claim 30, wherein the steps of connecting to a upgrade management server and selectively installing the list of recommended upgrade modules are controlled by a set of user defined policies.
38. The computer-readable program of claim 37, wherein the set of user defined policies includes a preferred connection time.
39. The computer-readable program of claim 37, wherein the set of user defined policies includes the connection resource to be used.
40. The computer-readable program of claim 37, wherein the set of user defined policies includes the specification of computer system areas/software products to enable automatic application of upgrades.
41. The computer-readable program of claim 37, wherein the set of user defined policies includes a defined time to connect to the upgrade management server to check for upgrades.
42. The computer-readable program of claim 37, wherein the set of user defined policies includes a defined elapsed time interval for connecting to the upgrade management server to check for upgrades.
43. The computer-readable program of claim 37, wherein the set of user defined policies includes a notification list for e-mailing user of information and actions relative to the upgrade management process.

44. The computer-readable program of claim 37, wherein the set of user defined policies include a list of one or more upgrade management servers to be used for the upgrade management process.
45. The computer-readable program of claim 30, wherein the set of selection policies is sent from the computer system to the upgrade management server.
46. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules based upon a specific set of upgrades requested by the computer system.
47. The computer-readable program of claim 45, wherein the set of selection policies includes comparing the revision levels of the one or more software modules residing on the computer system against the revision levels one or more software modules residing on the upgrade management server.
48. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying modules associated with a hardware change on the computer system.
49. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying software modules associated with a software change on the computer system.
50. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying upgrades specifically associated with an error triggering event on the computer system.
51. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying upgrades specifically associated with a performance triggering event on the computer system.

52. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by analyzing a problem history provided by the computer system.
53. The computer-readable program of claim 45, wherein the set of selection policies includes creating the list of recommended upgrade modules by identifying compatible revision levels between two or more software modules included within the list of modules.
54. A method for deploying computing infrastructure, comprising integrating computer-readable code into a computing system, wherein the code in combination with the computing system is capable of providing autonomic, event-driven upgrade maintenance of one or more software modules residing on a computer system, the method comprising the steps of:
- detecting a predefined triggering event on the computer system indicative of a potential maintenance issue;
 - connecting to an upgrade management server;
 - creating on the upgrade management server a list of recommended upgrade modules to download to the computer system, the list based upon a set of selection policies;
 - downloading the list of recommended upgrade modules from the upgrade management server to the computer system; and
 - selectively installing any upgrade modules chosen from the list of recommended upgrade modules on the computer system.